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EXAMINER	
SHIVERS, ASHLEY L	
ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/828,369	BEVERLY ET AL.	
	Examiner	Art Unit	
	ASHLEY L. SHIVERS	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on November 17, 2007 has been entered. Claims 1-2, 4-5, 7-10, 14, 17 and 21 have been amended. Claims 1-23 are still pending in this application, with claims 1, 10, 14, 17 and 21 being independent.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

--Claim 17 the term "article" has no antecedent basis in the specification.

Claim Objections

3. Claim 17 is objected to because of the following informalities:

-- In claim 17 line 6 "first precondition" should be "EDMA precondition".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The storage medium claimed lacks definition in the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine (**U.S. Patent No. 6,351,780**), hereinafter referred to as Ecclesine, in view of Firoozmand (**U.S. Patent No. 5,210,749**), hereinafter referred to as Firoozmand.

Regarding claim 1, Ecclesine teaches a method of receiving packets comprising:

setting an early direct memory access (EDMA) to indicate when to begin copying at least one packet payload from a first buffer of an offload engine to a receive buffer of a host memory (**EDMA interpreted to be a predetermined number of data frames received, a predetermined time period having passed, or a predetermined capacity of memory occupied; See col. 3 lines 11-25**);

receiving at least one packet at the offload engine from a network communication link (**Receiving from data frames from a plurality of terminals; See col. 2 lines 58-64**);

appending a packet payload of the at least one packet to the first buffer of the offload engine (**A memory buffer for holding the received data frames; See col.2 lines 58-64**);

determining whether the EDMA precondition has been met based, at least in part, on a state of the first buffer (**Checking to see if any of the predetermined conditions has been met; See col. 3 lines 11-25**); and

copying at least a portion of the first buffer of the offload engine to the receive buffer of the host memory if the EDMA precondition has been met (**Once the predetermined conditions have been met DMA copying begins; See col. 3 lines 11-25**).

Ecclesine fails to teach of setting a DMA precondition, determining if the DMA precondition has been met and repeating the method until the DMA precondition has been met.

Firoozmand teaches of:

setting a direct memory access (DMA) precondition (**Determining if the frame received needs to be flushed; See col. 15 lines 63-65**);

determining whether the DMA precondition has been met based, at least in part, on the state of the first buffer (**Testing the content to see whether the frame received needs to be flushed; See col. 15 lines 63-65**); and

repeating the method until the DMA precondition has been met (**Continuing to transfer packets that exceed the threshold unless the frame needs to be flushed; See col. 16 lines 8-10**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Ecclesine to include setting a DMA precondition, determining whether the precondition has been met, and repeating the method until the DMA precondition has been met taught by Firoozmand in order to determine which packets will be forwarded to the host memory and when the DMA copying process should begin.

Regarding claim 2, Ecclesine in view of Firoozmand teaches the limitations of claim 1. Ecclesine fails to teach of receiving another packet if the DMA precondition has not been met.

Firoozmand teaches of receiving another packet from the network communication link if the DMA precondition has not been met (**See col. 16 lines 3-10**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Ecclesine to include receiving another packet if the DMA precondition has not been met taught by Firoozmand in order to make sure that all of the good packets make it to the host memory.

Regarding claim 3, Ecclesine further teaches the method of claim 1 further comprising increasing a count to offset future copies from the first buffer to the host memory (**The DMA unloader tracks how many frames are read from memory buffer and therefore is set to increase as the packets are sent to the receive buffer; See col. 8 lines 20-22**).

Regarding claim 4, Ecclesine further teaches the method of claim 1 wherein said copying the at least a portion of the first buffer to the receive buffer comprises copying a portion of the packet payload (**Data frames are transferred to the receive buffer via DMA copying; See col. 3 lines 11-25**).

Regarding claim 5, Ecclesine teaches the method of claim 4 but fails to teach of determining that at least one packet has been received at the first buffer and copying to the host comprises copying at least two packet payloads.

Firoozmand teaches the method of:

determining that at least one packet payload of the first buffer has been previously received, wherein said copying the at least a portion of the first buffer to the receive buffer comprises copying the portion of the packet payload as well as the at least one previously received packet payload of the first buffer (**Packets are received from the network and stored in the buffer (See col. 15 line 19-20) and then when it reaches the threshold the packets are copied to the host memory (col. 15 lines 30-35) therefore it is obvious that one packet has been received and copying a portion of the packet payload would be at least copying the first and the second packet**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Ecclesine to include determining that at least one packet payload of the first buffer has been previously received and copying the portion of the packet payload as well as at least one previously received packet payload taught by Firoozmand in order to reduce latency.

Regarding claim 6, Ecclesine further teaches the method of claim 1 wherein said copying the at least a portion of the first buffer of the offload engine to the receive buffer of the host memory comprises a DMA copy of the at least a portion of the first buffer and releasing the at least a portion of the first buffer (**It is obvious that when the data has been copied the first buffer would be released to get more packets; See col. 3 lines 11-25**).

Regarding claim 7, Ecclesine teaches the method of claim 1 wherein the EDMA precondition comprises a predetermined percentage of the first buffer of the offload engine being filled with payload data (**The predetermined value could be a set percentage of the buffer; See col. 3 lines 21-25**).

Regarding claim 8, Ecclesine further teaches the method of claim 1 wherein the EDMA precondition comprises a predetermined number of bytes in the first buffer of the offload engine (**See col. 3 lines 11-15**).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine in view of Firoozmand in further view of Hausman et al. (**U.S. Patent No. 5,412,782**), hereinafter referred to as Hausman.

Regarding claim 9, Ecclesine in view of Firoozmand teaches the limitations of claim 1. Ecclesine further teaches of the EDMA precondition comprising a predetermined time period having passed since said setting of the EDMA precondition (**When a predetermined time period passes the frames are copied to the receive buffer via DMA copying; See col. 3 lines 16-20**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Ecclesine in view of Firoozmand to include the predetermined time period having passed since said setting of the EDMA precondition taught by Hausman in order to indicate a time to start forwarding the packets to the host memory.

8. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine in view of Kasper et al. (**U.S. Patent No. 6,717,910**), hereinafter referred to as Kasper.

Regarding claim 10, Ecclesine teaches a network offload engine comprising:

a first interface to receive packets from a network communication link (**An interface between the terminals and the host processor; See col. 2 lines 62-63**);

a first buffer to store packet payloads of at least some of the received packets (**Memory buffer; See col. 2 line 62**);

a second interface to a host memory to copy the packet payloads that are stored in the first buffer to a receive buffer in the host memory in response to a first precondition (**Host Interface; See Fig. 1**);

logic to copy contents of the first buffer to a location in the receive buffer of the host memory in response to the EDMA precondition being met (**Controller with buffer manager; See Fig. 3, 210; col. 3 lines 4-7**); and

a count device that offsets the location in the receive buffer where the contents of the first buffer are being sent (**The DMA unloader tracks how many frames are read from memory buffer and therefore is set to increase as the packets are sent to the receive buffer; See col. 8 lines 20-22**).

Ecclesine fails to teach about the logic to notify a host in response to meeting a DMA precondition.

Kasper teaches of the logic to notify a host in response to meeting a DMA precondition (**An early congestion interrupt is generated from the DMA unit to the host processor indicating that an overflow has occurred; See col. 20 lines 36-42 and 47-50**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the network offload engine of Ecclesine to include notifying a host in response to meeting a DMA precondition taught by Kasper in order to know that a retransmission of the packet(s) needs to occur.

Regarding claim 11, Ecclesine further teaches the network offload engine of claim 10 wherein the count device stores a number representing the number of bytes that have been copied from the first buffer to the receive buffer (**See col. 8 lines 20-22**).

Regarding claim 12, Ecclesine further teaches of the network offload engine further comprising a direct memory access engine to copy payload data from the first buffer to the receive buffer (**See col. 3 lines 11-15**).

9. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine in view of Kasper in further view of Hausman et al. (**U.S. Patent No. 5,412,782**), hereinafter referred to as Hausman.

Regarding claim 13, Ecclesine in view of Kasper teaches the above limitations of claim 10. However, they fail to teach what type of network communication link is used.

Hausman teaches of the network communication link comprising a cable for Ethernet communication (**Adapter for communications between a host computer and an Ethernet computer network twisted pair wires; See col. 2 lines 27-30**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention would know to modify the network offload engine of Ecclesine in view of Kasper to include a network communication link that comprises of a cable for Ethernet communication taught by Hausman in order indicate the form of communication used to connect the various network components.

Regarding claim 14, Ecclesine teaches a system comprising:

a host processor to host applications for receiving packets (**See col. 2 lines 58-64**);

a host memory having a receive buffer to store packet payload data received from a network communication link communicating with the host **(System memory; See col. 2 lines 64-67)**;

a network offload engine to receive the packet payload data in a first buffer (**A system for receiving data frames and a memory buffer for holding the frames; See col. 2 lines 62-64**), the network offload engine having an engine to copy the packet payload data in the first buffer to the receive buffer of the host memory independently of notification of the host processor and in response to the first buffer meeting a EDMA precondition (**Once the predetermined conditions have been met DMA copying begins; See col. 3 lines 11-26**).

Ecclesine fails to teach of notifying the host in response to meeting a DMA precondition and the network using an unshielded twisted pair communication link to transmit packets.

Kasper teaches of the engine notifying the host processor in response to a DMA precondition being met (**An early congestion interrupt is generated from the DMA unit to the host processor indicating that an overflow has occurred; See col. 20 lines 36-42 and 47-50**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the network offload engine of Ecclesine to include notifying a host in response to meeting a DMA precondition taught by Kasper in order to know that a retransmission of the packet(s) needs to occur.

Ecclesine in view of Kasper still fails to teach of using an unshielded twisted pair.

Hausman teaches of using a twisted pair communication link to transmit packets (**One of ordinary skill in the art at the time the invention was made would have known that the twisted pair wires could be unshielded; See col. 2 lines 27-30**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of Ecclesine in view of Kasper to include the unshielded twisted pair communication link to transmit packets taught by Hausman in order to show that it is common to use an unshielded twisted pair to move packets.

Regarding claim 15, Ecclesine further teaches the system of claim 14 wherein the network offload engine further comprises a direct memory access engine for copying the packet payload data in the first buffer to the receive buffer (**See col. 3 lines 2-4**).

Regarding claim 16, Ecclesine in view of Kasper and Hausman teach the above limitations of claim 14. Ecclesine in view of Kasper still fails to teach what type of communication link is used.

Hausman further teaches of the twisted pair communication link comprising an Ethernet adapter **(See col. 2 lines 27-30).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ecclesine in view of Kasper to include an unshielded twisted pair communication link comprising an Ethernet adapter taught by Hausman in order to provide a way to bring the network components together.

10. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine in view of Firoozmand in further view of Hausman.

Regarding claim 17, Ecclesine discloses an article comprising:

a storage medium of a network adapter comprising machine-readable instructions (**Network controller with decision logic; col. 3 lines 39-51**) stored thereon to:

set an EDMA (**EDMA interpreted to be a predetermined number of data frames received, a predetermined time period having passed, or a predetermined capacity of memory occupied; See col. 3 lines 11-25**) to copy received packets in a first buffer of a network offload engine of the network adapter to a receive buffer at a host memory in response to, at least in part, meeting the EDMA precondition at the network adapter (**See col. 3 lines 11-25**);

append a packet payload to the first buffer of the offload engine (**A memory buffer for holding the received data frames; See col. 2 lines 58-64**); and

copy at least a portion of the first buffer of the offload engine to the receive buffer of the host memory in response to meeting the EDMA precondition (**Once the predetermined conditions have been met DMA copying begins; See col. 3 lines 11-25**).

Ecclesine fails to teach of setting a DMA precondition, repeating the method until the DMA precondition has been met and accessing a flag to indicate whether the preconditions have been met.

Firoozmand teaches of:

setting a DMA precondition (**Determining if the frame received needs to be flushed; See col. 15 lines 63-65**); and

repeating the method each time the EDMA precondition has been met until meeting the DMA precondition (**Continuing to transfer packets that exceed the threshold unless the frame needs to be flushed; See col. 16 lines 8-10**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the article of Ecclesine to include setting a DMA precondition and repeating the method each time the EDMA precondition has been met until meeting the DMA precondition taught by Firoozmand in order to indicate when to stop and remove packets with errors.

Ecclesine in view of Firoozmand still fails to teach of accessing a flag to indicate whether the EDMA or DMA preconditions have been met.

Hausman teaches of:

accessing with an engine of the offload engine a flag that indicates whether the EDMA precondition has been met by said appending the packet payload to the first buffer of the offload engine (**An early receive interrupt will be generated once the predetermined number of bytes has been received; See col. 3 lines 25-29**); and

accessing with the engine another flag that indicates whether the DMA precondition has been met by the packet payload being appended to the first buffer in view of previous packet payloads that have been appended to the first buffer (**The ER flag indicates whether there was an error in the reception of the packet; See col. 4 lines 13-15**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the article of Ecclesine in view of Firoozmand to include accessing flag when the EDMA and DMA precondition have been met taught by Hausman in order to know when to start the DMA copying process and when to retransmit a discarded packet.

Regarding claim 18, Ecclesine further teaches the article of claim 17 wherein the storage medium further comprises machine-readable instructions to increase a count when the at least a portion of the first buffer is copied to the receive buffer, the count to offset future copies from the first buffer to the receive buffer (**See col. 8 lines 20-22**).

Regarding claim 19, Ecclesine further teaches the article of claim 17 wherein the storage medium further comprises machine-readable instructions to copy the at least a portion of the first buffer to the receive buffer without notifying a host processor (**The decision logic means automatically engages the DMA copying process to transfer data frames; See col. 3 lines 39-51**).

Regarding claim 20, Ecclesine further teaches the article of claim 17 wherein the storage medium further comprises machine-readable instructions to receive packets at the first buffer (**See col. 2 lines 58-64**).

11. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ecclesine in view of Firoozmand in further view of Kasper.

Regarding claim 21, Ecclesine teaches a method comprising:

setting an EDMA precondition (**EDMA interpreted to be a predetermined number of data frames received, a predetermined time period having passed, or a predetermined capacity of memory occupied; See col. 3 lines 11-25**);

receiving packets of a network transmission at a network offload engine of the system (**Receiving from data frames from a plurality of terminals; See col. 2 lines 58-64**); and

copying at least a portion of the received packets to a host buffer without notifying a host processor in response to the system meeting the EDMA precondition (**Once the predetermined conditions have been met DMA copying begins; See col. 3 lines 11-25**).

Ecclesine fails to teach of setting a DMA precondition, re-setting the EDMA precondition, repeating the method until meeting the DMA precondition, notifying the host after meeting the DMA precondition and copying any remaining of the received packets to the host buffer after notifying the host.

Firoozmand teaches of:

setting a DMA (**Determining if the frame received needs to be flushed; See col. 15 lines 63-65**) precondition in a system for receiving packets;

re-setting the EDMA precondition (**While it is not explicitly stated that the precondition is re-set once the packets have been forwarded to the host buffer, it is obvious based on the conditions of col. 15 lines 30-35 that the value is re-set once the packets have been moved from the first buffer to the host memory**);

repeating the method until meeting the DMA precondition (**Continuing to transfer packets that exceed the threshold unless the frame needs to be flushed; See col. 16 lines 8-10**);

copying any remaining of the received packets in the network offload engine to the host buffer after said notifying the host (**Transfer continues once the flushed data has been removed; See col. 16 lines 8-10**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the article of Ecclesine to include setting a DMA precondition and repeating the method until meeting the DMA precondition taught by Firoozmand in order to know to re-set the threshold for the new packets to be received, discard packets with errors instead of forwarding them on to the host memory and then continuing to copy the rest of the packets in the buffer.

Ecclesine in view of Firoozmand still fails to teach of notifying the host that the DMA precondition has been met.

Kasper teaches of the engine notifying the host processor in response to a DMA precondition being met (**An early congestion interrupt is generated from the DMA unit to the host processor indicating that an overflow has occurred; See col. 20 lines 36-42 and 47-50**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the network offload engine of Ecclesine in view of Firoozmand to include notifying a host in response to meeting a DMA precondition taught by Kasper in order to know that a retransmission of the packet(s) needs to occur.

Regarding claim 22, Ecclesine in view of Firoozmand and Kasper teaches the limitation of claim 21. Ecclesine fails to teach of copying the packets to the host buffer before receiving all of the packets of the network transmission.

Firoozmand teaches of copying the at least a portion of the received packets of the offload engine to the host buffer without notifying the host processor comprises copying the at least a portion of the received packets prior to receiving all of the packets of the network transmission (**The threshold enables the buffer to begin transferring received data while data is incoming from the network; See col. 15 lines 49-52**).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the method of Ecclesine to include copying the packets to the host buffer prior to receiving all the packets from the network transmission taught by Firoozmand in order to reduce latency.

Regarding claim 23, Ecclesine further teaches of receiving packets of the network transmission at the network offload engine comprises receiving packets at a first buffer of the network offload engine (**See col. 2 lines 58-64**).

Response to Arguments

10. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

12. Any response to this action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner of Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashley L. Shivers whose telephone number is (571) 270-3523. The examiner can normally be reached on Monday-Thursday 8:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ashley L. Shivers
2/1/2008
Art Unit 2619

CHIRAG G. SHAH
PRIMARY PATENT EXAMINER